CHAPTER 10

LOADS AND LOADING OPERATIONS

To successfully support military operations, motor transport unit operating personnel must be trained in and be aware of the principles of vehicle loads and cargo loading. This chapter addresses these principles, with emphasis on shipper and receiver responsibilities, hazardous material, oversize and overweight loads, and methods of loading and unloading.

10-1. RESPONSIBILITIES OF UNIT PERSONNEL. All motor transport company personnel have some responsibility for vehicle loads and cargo loading. A discussion of individual responsibilities follows. For specific information on loading, see FM 55-15 or the applicable vehicle technical manual.

a. **Company Commander**. The company commander develops training plans for the unit. He ensures that company personnel are qualified to safely operate all equipment and are thoroughly trained in the principles of loading, securing, and transporting cargo. He also ensures that company training plans support individual driver skills, the required METL, and MOS training.

b. **Platoon Leader**. The platoon leader and platoon sergeant develop the platoon's training plans based on their assessment of training needs. Plans include both individual and collective tasks. The platoon leader and platoon sergeant also implement company training plans and policies and ensure that squad leaders are qualified. They review driver testing and qualification records and observe driver training. They keep the commander informed of the platoon's level of training.

c. **Truckmaster**. The truckmaster maintains driver qualification records and ensures that personnel are properly trained before being licensed. He must be satisfied that training is conducted according to standard. For this reason, the truckmaster regularly observes driver training. Based on the type of equipment in the unit, he may incorporate load and loading criteria in testing. The truckmaster also screens commitments that involve unusual or hazardous loads and highlights them for the tasked platoon.

d. **Squad Leader**. The squad leader trains drivers to properly load and secure cargo on their vehicles. He ensures that operators know what they are carrying and that both drivers and vehicles are prepared to move the types of loads specified in taskings. The squad leader also supervises maintenance and ensures that vehicles meet operational standards.

e. **Driver**. The driver supervises the loading of his vehicle and ensures that his cargo is properly loaded and secured against movement. He further ensures that the load is balanced and does not exceed the vehicle capacity as noted on the data plate. He uses the vehicle tarpaulin to protect the load from the weather and pilferage. Once the driver accepts the load from the shipper, he alone is responsible for its safe delivery. The driver should not accept an unsafe load and must resolve any dispute before moving.

10-2. SHIPPER'S RESPONSIBILITIES. Unless the vehicle has an onboard loading system such as a crane or PLS, the shipper normally loads the vehicle. The shipper provides all tie-down devices, dunnage, blocking and bracing materials, and special tools required to secure the load. An exception is loading containers on semitrailers equipped with locking devices. The shipper also prepares shipping documents such as the TCMD.

10-3. CARGO CHARACTERISTICS. The shipper's request for transportation identifies the characteristics of the cargo--its description, dimensions, and weight. This data is used by unit operations personnel to plan the number and types of vehicles needed to support the movement and tells drivers what they need to prepare for the movement (such as the requirement for a tarpaulin, placards, protective clothing, and fire extinguishers). If transporting hazardous material, this information alerts drivers to prepare vehicles for certain inspections and to seek guidance on loading techniques from squad leaders, platoon sergeants, or truckmasters.

a. **Cargo Area**. The vehicle cargo area is measured in cubic feet. (To calculate cubic feet, take the length times width times height.) Cargo dimensions should not exceed the dimensions of the vehicle. An exception is made for certain outsize loads where there is an overhang from the sides or tail end. To make efficient use of assets, transportation units should try to maximize the weight and cube of vehicles and send only the number of vehicles that can safely carry the load. Theoretically, a perfect cargo load is one that exactly matches the cubic measurement of the vehicle's cargo area and its allowable weight. For example, if the maximum payload capacity of an M923 5-ton cargo truck traveling on a highway was fully used, the load (piled no higher than the side racks) would occupy about 550 cubic feet (15.40 cubic meters) and weigh 20,000 pounds. These conditions are seldom met. The weight, bulk, shape, and compatibility of the cargo, along with road conditions, affect how the vehicle will be loaded.

b. **Weight**. When loading dense cargo such as ammunition or machinery, the vehicle weight limit may be reached before the cargo space is filled. In other words, it may weigh out before it cubes out. In such cases, the load must be blocked and braced to prevent shifting. With most military cargo loads, however, the vehicle will cube out before it weighs out.

The weight of most military cargo is usually stenciled on the package and noted on the transportation request. The total shipment weight equals the sum of the individual package weights. If the weight is not stenciled on the cargo, the driver should ask the shipper to weigh it before loading. If this is not feasible, the driver should try to have the vehicle weighed after loading. This will ensure that the vehicle is not overloaded.

When these options are not possible, the driver should require the shipper to provide an estimated weight and annotate the estimated weight on the shipping document. If the driver has doubts about the vehicle's ability to transport the load safely, he should not accept the load.

c. **Cargo Compatibility**. Shippers are required to identify commodities that should not be shipped together on the same vehicle. If there is any doubt and before the driver transports the cargo, shippers should consult appropriate references for guidance. For shipments within CONUS, use 49 CFR, Part 177. When operating overseas, rules of the host country apply. The rules of each country transited, as well as international agreements, govern international shipments of hazardous cargo by highway. If the driver has any doubt about the safety of the load, he should contact the nearest transportation officer, movement control team, or his unit.

10-4. ROAD CONDITIONS. Every road can be classified based on its construction. Engineers normally classify roads. Classification includes bridges, tunnels, and other features that limit width, height, or weight. The payload capacity of a vehicle may be too high for existing roads or bridges. Light surface, loose surface, or fair weather roads may not bear the weight of a fully loaded vehicle. Accordingly, a driver must be familiar with the road he will travel and how its condition affects the allowable payload. For example, an unimproved mountainous road dictates a reduced load compared to a flat hard-surfaced highway. The nature of the road surface may also affect the amount of blocking and bracing needed to secure the load.

10-5. LOADING PROCEDURES. Proper loading procedures are essential to safe operations. They also support successful mission accomplishment by ensuring operational economy and efficiency. Truck unit capability is specified by TOE. See FM 55-15 for vehicle and equipment planning factors and AR 385-55 for more information on requirements for transporting passengers in tactical vehicles.

a. **Improper Loading Practices**. Underloading and overloading are improper loading practices. Though underloading does not affect vehicle operation or safety, it does affect operational efficiency. Underloading requires more vehicles than necessary to do the job. It wastes vehicles and personnel and causes unnecessary expenditures of fuel and lubricants. It also creates added highway regulation and traffic control problems that can affect all highway movements in the area. Vehicle overloading is a serious concern because it can damage the vehicle and is unsafe. Drivers should not accept loads that are greater than the authorized payload.

b. **Loading Cargo**. The amount of cargo that can be loaded lengthwise into a truck varies by truck size and model. The length and width of cargo trucks and semitrailer bodies is listed in TB 55-46-1. If it is necessary for pipes, lumber, or other cargo to hang over the front and rear of the vehicle, the cargo must be blocked to keep the weight off the tailgate. A red flag must also be placed at each end of the load in the daytime (a red light at night) to warn other motorists that the vehicle needs added road space. The amount of overhang allowed varies from state to state and country to country. Units must know local traffic rules. The following are general rules for loading cargo:

- Place heavy items on the bottom and lighter cargo on top.
- Distribute heavy cargo as evenly as possible over the bed to maintain a safe weight distribution.
- Block and brace cargo with lumber or other materials to keep the load from shifting or falling off the vehicle while en route.
- Keep the load as low as possible. A high load may make the vehicle difficult to control and may cause it to overturn.
- Fill the cargo space of the vehicle to the maximum weight allowable.
- For multistop loads, separate cargo by destination for easy offloading.
- If possible, load items of uniform size and weight together (this simplifies lashing, blocking, and distributing cargo).
- Load drums and barrels either upright or on their sides. If loaded on their sides, their length should be parallel to the sides of the truck (Figure 10-1, page 10-4).

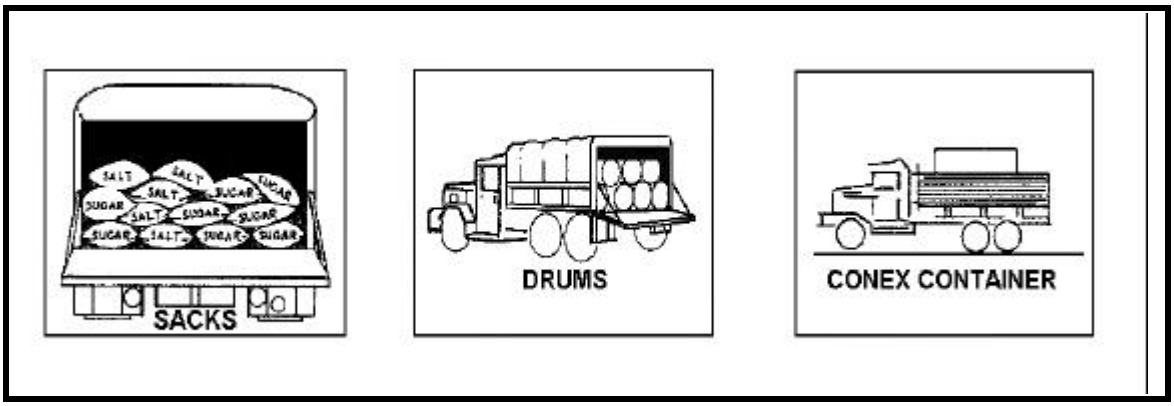

Figure 10-1. Cargo loading methods

c. **Troops and Their Equipment**. Certain vehicles designed for cargo may also carry troops and EPWs. The number of troops varies with the size of the truck and duration of the trip. Only authorized individuals may ride in military vehicles. Passengers must stay seated with all parts of their bodies inside the truck. Ventilation must protect them from exhaust gases. They should mount or dismount only after the driver or assistant driver has lowered the tailgate and disconnected the safety strap. If the tactical situation permits, a tarpaulin should be used to protect troops from the weather.

To prevent injury during loading or unloading, a soldier should not mount or dismount the vehicle with his weapon. He should pass it to someone already on board or to the person behind waiting to mount. Each soldier takes back his weapon once on board. Likewise, a soldier should not mount or dismount the vehicle with his truck sack or duffel bag on his back. Once on board, he should stack it on the bed of the truck or under the seats. The number of truck sacks or duffel bags that accompany soldiers will reduce the number of troops that can be loaded on each vehicle. However, loading them with the soldiers also reduces the chance of lost equipment.

Individual equipment not needed on the march may be loaded in separate trucks or trailers. This practice relieves soldiers of added responsibility and is less fatiguing. It also ensures that, if the enemy attacks, soldiers will not be burdened with nonessential equipment. Passengers and cargo are never hauled on the same vehicle.

10-6. TRANSPORTING HAZARDOUS MATERIAL. Hazardous material is a material or substance capable of posing an unreasonable risk to health, safety, and property when transported, as determined by the Secretary of Transportation. Hazardous materials are designated in 49 CFR and include the following:

- Explosives.
- Flammable liquids.
- Flammable solids.
- Oxidizing materials.
- Corrosive liquids.
- Compressed gases.

- Poisons.
- Radioactive material.
- Chemical agents.
- Ammunition.

Trucks hauling passengers will be separated from any vehicle hauling hazardous cargo by at least one buffer vehicle hauling general cargo.

a. **References**. In CONUS, Army vehicles carrying special loads must comply with 49 CFR and AR 190-11. When operating overseas, local regulations and policies apply. For detailed instructions on hauling AA&E, refer to AR 190-11 and AR 55-355. For information on transporting radioactive materials, see AR 385-11 and TM 55-315. For information on transporting chemical agents, see AR 50-6 and TM 3-250. For information on transporting nuclear weapons and materials, see AR 700-65. For instructions on the handling and storage of hazardous material, see TM 38-410. The proper marking and placement of placards on vehicles carrying hazardous cargo is covered by 49 CFR within CONUS (see 49 CFR, Parts 100-199, or FM 55-15, Appendix E) or by overseas regulations.

b. **Shipper Responsibilities**. Any shipper who offers a hazardous material for transportation must describe the hazardous material on the shipping documents. The driver of a motor vehicle containing hazardous material must ensure that the shipping document is readily available in the event of an accident or inspection.

At origin, the shipper must inspect vehicles before they are loaded with hazard Classes 1.1 through 1.3 ammunition, explosives, poisons, radioactive "Yellow III" material, and chemical agents. The shipper uses DD Form 626 (Figure 10-2, pages 10-6 through 10-8). Each item on the form must be completed. The driver must correct all deficiencies before the vehicle is loaded.

c. **Receiver Responsibilities**. If the destination is a restricted area, the vehicle is inspected before unloading using the DD Form 626. A restricted area is any area to which entry is subject to special restrictions or control for security reasons or to safeguard property or material. An example is an ammunition supply point. Deficiencies must be corrected at the time of inspection if practicable and if necessary for safe delivery to the unloading point. If a correction is necessary but impracticable, proper action must be taken to ensure safe delivery of the shipment. This could include use of ground guides, reduced speed, or escort vehicles. Military shippers use DD Form 836 (Figure 10-3, pages 10-9 through 10-13) to instruct drivers transporting hazardous material. The form outlines precautions to take in event of fire, accident, or breakdown. The shipper or transportation officer can add information related to the specific movement. Drivers should get a copy of DD Form 836 from the shipper or ammunition supply point before departure. The driver should read the DD Form 836 before departure and ask questions if he does not understand it.

MOTOR VEHICLE INSPECTION (TRANSPORTING HAZARDOUS MATERIALS)

(Read Instructions before completing this form.)

This form applies to Class 1.1, 1.2, 1.3; Inhalation Hazard Poisons and Radioactive Label III Hazardous Material.	1. GOVERNMENT BILL OF LADING/ TCR NUMBER

SECTION I - DOCUMENTATION	ORIGIN a.	DESTINATION b.
2. CARRIER/GOVERNMENT ORGANIZATION		
3. DATE OF INSPECTION		
4. TIME OF INSPECTION		
5. LOCATION OF INSPECTION		
6. OPERATOR(S) NAME(S)		
7. OPERATOR(S) LICENSE NUMBER(S)		
8. MEDICAL EXAMINER'S CERTIFICATE*		

9. *(X if satisfactory at origin)*				10. CVSA DECAL DISPLAYED ON COMMERCIAL EQUIPMENT*	YES	NO
a. MILITARY HAZ/MAT CERTIFICATION		d. ERG OR EQUIVALENT				
b. VALID LEASE*		e. DRIVER'S VEHICLE INSPECTION REPORT*		a. TRUCK/TRACTOR		
c. ROUTE PLAN		f. COPY OF 49 CFR PART 397		b. TRAILER		

SECTION II - MECHANICAL INSPECTION

All items shall be checked on empty equipment prior to loading. Items with an asterisk shall be checked on all incoming loaded equipment.

11. TYPE OF VEHICLE(S)	12. VEHICLE NUMBER(S)

13. PART INSPECTED *(X as applicable)*	ORIGIN (1) SAT	ORIGIN (1) UNSAT	DESTINATION (2) SAT	DESTINATION (2) UNSAT		ORIGIN (1) SAT	ORIGIN (1) UNSAT	DESTINATION (2) SAT	DESTINATION (2) UNSAT	COMMENTS (3)
a. SPARE ELECTRICAL FUSES					k. EXHAUST SYSTEM					
b. HORN OPERATIVE					l. BRAKE SYSTEM*					
c. STEERING SYSTEM					m. SUSPENSION					
d. WINDSHIELD/WIPERS					n. COUPLING DEVICES					
e. MIRRORS					o. CARGO SPACE					
f. WARNING EQUIPMENT					p. LANDING GEAR*					
g. FIRE EXTINGUISHER*					q. TIRES, WHEELS, RIMS					
h. ELECTRICAL WIRING*					r. TAILGATE/DOORS*					
i. LIGHTS AND REFLECTORS					s. TARPAULIN*					
j. FUEL SYSTEM*					t. OTHER *(Specify)*					

14. INSPECTION RESULTS *(X one)* ACCEPTED ☐ REJECTED ☐

(If rejected give reason under "Remarks". Equipment will be approved if deficiencies are corrected prior to loading.)

15. REMARKS

16. INSPECTOR SIGNATURE *(Origin)*	17. INSPECTOR SIGNATURE *(Destination)*

SECTION III - POST LOADING INSPECTION

This section applies to Commercial and Government/Military vehicles. All items will be checked prior to release of loaded equipment and shall be checked on all incoming loaded equipment.

	ORIGIN (1) SAT	ORIGIN (1) UNSAT	DESTINATION (2) SAT	DESTINATION (2) UNSAT	COMMENTS (3)
18. LOADED IAW APPLICABLE SEGREGATION/COMPATIBILITY TABLE OF 49 CFR					
19. LOAD PROPERLY SECURED TO PREVENT MOVEMENT					
20. SEALS APPLIED TO CLOSED VEHICLE; TARPAULIN APPLIED ON OPEN EQUIPMENT					
21. PROPER PLACARDS APPLIED					
22. SHIPPING PAPERS/DD FORM 836 FOR GOVERNMENT VEHICLE SHIPMENTS					
23. COPY OF DD FORM 626 FOR DRIVER					
24. SHIPPED UNDER DOT EXEMPTION 868					

25. INSPECTOR SIGNATURE *(Origin)*	26. DRIVER(S) SIGNATURE *(Origin)*
27. INSPECTOR SIGNATURE *(Destination)*	28. DRIVER(S) SIGNATURE *(Destination)*

DD FORM 626, OCT 95 PREVIOUS EDITION IS OBSOLETE. Page 1 of 3 Pages

Figure 10-2. DD Form 626

INSTRUCTIONS

SECTION I - DOCUMENTATION

General Instructions.

All items (2 through 10) will be checked at origin prior to loading. Items with an asterisk (*) apply to commercial operators or equipment only. Only items 2 through 8 are required to be checked at destination.

Items 1 through 6. Self explanatory.

Item 7. Enter operator's Commercial Driver's License (CDL) number or Military License Number. CDL must have Hazardous Materials Endorsement.

Item 8. *Enter the expiration date listed on the Medical Examiner's Certificate.

Item 9.a. APPLIES TO MILITARY OPERATORS ONLY. Military Hazardous Materials Certification. In accordance with applicable service regulations, ensure operator has been certified to transport hazardous materials.

b. *Valid Lease. Shipper will ensure a copy of the appropriate contract of lease is carried in all leased vehicles and is available for inspection. (Defense Traffic Management Regulation requirement.)

c. Route Plan. Prior to loading any Hazard Class/Division 1.1, 1.2, or 1.3 (Explosives) for shipment, ensure that the operator possesses a written route plan in accordance with 49 CFR Part 397. Route Plan requirements for Hazard Class 7 (Radioactive) materials are found in 49 CFR 177.825.

d. Emergency Response Guidebook (ERG) or Equivalent. Commercial operators must be in possession of an ERG or equivalent document. Shipper will provide applicable ERG page(s) to military operators.

e. *Driver's Vehicle Inspection Report. Review the operator's Vehicle Inspection Report. Ensure that there are no defects listed on the report that would affect the safe operation of the vehicle.

f. Copy of 49 CFR Part 397. Operators are required by regulation to have in their possession a copy of 49 CFR Part 397 (Hazardous Materials Driving and Parking Rules). If military operators do not possess this document, shipper may provide a copy to operator.

Item 10. *Commercial Vehicle Safety Alliance (CVSA) Decal. Check to see if equipment has a current CVSA decal and mark applicable box.

SECTION II - MECHANICAL INSPECTION

General Instructions.

All items (13.a. through 13.t.) will be checked on all incoming empty equipment prior to loading. All UNSATISFACTORY conditions must be corrected prior to loading. Items with an asterisk (*) shall be checked on all incoming loaded equipment. Unsatisfactory conditions that would affect the safe off-loading of the equipment must be corrected prior to unloading.

SECTION II *(Continued)*

Item 13.a. Spare Electrical Fuses. Check to ensure that at least one spare fuse for each type of installed fuse is carried on the vehicle as a spare or vehicle is equipped with an overload protection device (circuit breaker). (49 CFR 393.95)

b. Horn Operative. Ensure that horn is securely mounted and of sufficient volume to serve purpose. (49 CFR 393.81)

c. Steering System. The steering wheel shall be secure and must not have any spokes cracked through or missing. The steering column must be securely fastened. Universal joints shall not be worn, faulty or repaired by welding. The steering gear box shall not have loose or missing mounting bolts or cracks in the gear box mounting brackets. The pitman arm on the steering gear output shaft shall not be loose. Steering wheel shall turn freely through the limit of travel in both directions. All components of a power steering system must be in operating condition. No parts shall be loose or broken. Belts shall not be frayed, cracked or slipping. The power steering system shall not be leaking. (49 CFR 396 Appendix G)

d. Windshield/Wipers. Inspect to ensure that windshield is free from breaks, cracks or defects that would make operation of the vehicle unsafe; that the view of the driver is not obscured and that the windshield wipers are operational and wiper blades are in serviceable condition. Defroster must be operative when conditions require. (49 CFR 393.60, 393.78 and 393.79)

e. Mirrors. Every vehicle must be equipped with two rear vision mirrors located so as to reflect to the driver a view of the highway to the rear along both sides of the vehicle. Mirrors shall not be cracked or dirty. (49 CFR 393.80)

f. Warning Equipment. Equipment must include three bidirectional emergency reflective triangles that conform to the requirements of FMVSS No. 125. FLAME PRODUCING DEVICES ARE PROHIBITED. (49 CFR 393.95)

g. Fire Extinguisher. Military vehicles must be equipped with two serviceable fire extinguishers with an Underwriters Laboratories rating of 10 BC or more. (Commercial motor vehicles must be equipped with one serviceable 10 BC Fire Extinguisher). Fire extinguisher(s) must be located so that it is readily accessible for use and securely mounted on the vehicle. The fire extinguisher must be designed, constructed and maintained to permit visual determination of whether it is fully charged. (49 CFR 393.95)

h. Electrical Wiring: Electrical wiring must be clean and properly secured. Insulation must not be frayed, cracked or otherwise in poor condition. There shall be no uninsulated wires, improper splices or connections. Wires and electrical fixtures inside the cargo area must be protected from the lading. (49 CFR 393.28, 393.32, 393.33)

DD FORM 626, OCT 95 Page 2 of 3 Pages

Figure 10-2. DD Form 626 (continued)

INSTRUCTIONS

SECTION II *(Continued)*

i. Lights/Reflectors. (Head, tail, turn signal, brake, clearance, marker and identification lights, Emergency Flashers). Inspect to see that all lighting devices and reflectors required are operable, of proper color and properly mounted. Ensure that lights and reflectors are not obscured by dirt or grease or have broken lenses. High/Low beam switch must be operative. Emergency Flashers must be operative on both the front and rear of vehicle. (49 CFR 393)

j. Fuel System. Inspect fuel tank and lines to ensure that they are in serviceable condition, free from leaks, or evidence of leakage and securely mounted. Ensure that fuel tank filler cap is not missing. Examine cap for defective gasket or plugged vent. Inspect filler necks to see that they are in completely serviceable condition and not leaking at joints. (49 CFR 393.83 and 396 Appendix G)

k. Exhaust System. Exhaust system shall discharge to the atmosphere at a location to the rear of the cab or if the exhaust projects above the cab, at a location near the rear of the cab. Exhaust system shall not be leaking at a point forward of or directly below the driver compartment. No part of the exhaust system shall be located where it will burn, char or damage electrical wiring, fuel system or any other part of the vehicle. No part of the exhaust system shall be temporarily repaired with wrap or patches. (49 CFR 393.83 and 396 Appendix G)

l. Brake System (to include hand brakes, parking brakes and Low Air Warning devices). Check to ensure that brakes are operational and properly adjusted. Check for audible air leaks around air brake components and air lines. Check for fluid leaks, cracked or damaged lines in hydraulic brake systems. Ensure that parking brake is operational and properly adjusted. Low Air Warning devices must be operative. (49 CFR 396 Appendix G)

m. Suspension. Inspect for indications of misaligned, shifted or cracked springs, loosened shackles, missing bolts, spring hangers unsecured at frame and cracked or loose U-bolts. Inspect for any unsecured axle positioning parts, and sign or axle misalignment, broken torsion bar springs (if so equipped). (49 CFR 396 Appendix G)

n. Coupling Devices (Inspect without uncoupling). Fifth Wheel: Inspect for unsecured mounting to frame or any missing or damaged parts. Inspect for any visible space between upper and lower fifth wheel plates. Ensure that the locking jaws are around the shank and not the head of the kingpin. Ensure that the release lever is seated properly and safety latch is engaged. Pintle Hook, Drawbar, Towbar Eye and Tongue and Safety Devices: Inspect for unsecured mounting, cracks, missing or ineffective fasteners (welded repairs to pintle hook is prohibited). Ensure safety devices (chains, hooks, cables) are in serviceable condition and properly attached. (49 CFT 396 Appendix G)

o. Cargo Space. Inspect to ensure that cargo space is clean and free from exposed bolts, nuts, screws, nails or inwardly projecting parts that could damage the lading. Check floor to ensure it is tight and free from holes. Floor shall not be permeated with oil or other substances. (49 CFR 177.815(e)(1) and 398.94)

SECTION II *(Continued)*

p. Landing Gear. Inspect to ensure that landing gear and assembly are in serviceable condition, correctly assembled, adequately lubricated and properly mounted.

q. Tires, Wheels and Rims: Inspect to ensure that tires are properly inflated. Flat or leaking tires are unacceptable. Inspect tires for cuts, bruises, breaks and blisters. Tires with cuts that extend into the cord body are unacceptable. Thread depth shall not be less than: 4/32 inches for tires on a steering axle of a power unit, and 2/32 inches for all other tires. Mixing bias and radial on the steering axle is prohibited. Inspect wheels and rims for cracks, unseated locking rings, broken, loose, damaged or missing lug nuts or elongated stud holes. (49 CFR 396 Appendix G)

r. Tailgate/Doors. Inspect to see that all hinges are tight in body. Check for broken latches and safety chains. Doors must close securely. (49 CFR 177.835(h))

s. Tarpaulin. If shipment is made on open equipment, ensure that lading is properly covered with fire and water resistant tarpaulin. (49 CFR 177.835(h))

t. Other Unsatisfactory Condition. Note any other condition which would prohibit the vehicle from being loaded with hazardous materials.

SECTION III - POST LOADING INSPECTION

General Instructions.

All items will be checked prior to the release of loaded equipment. Shipment will not be released until deficiencies are corrected. All items will be checked on incoming loaded equipment. Deficiencies will be reported in accordance with applicable service regulations.

Item 18. Check to ensure shipment is loaded in accordance with 49 CFR Part 177.848 and the applicable Segregation or Compatibility Table of 49 CFR 177.848.

Item 19. Check to ensure the load is secured from movement in accordance with applicable service outload drawings.

Item 20. Check to ensure seal(s) have been applied to closed equipment; fire and water resistant tarpaulin applied on open equipment.

Item 21. Check to ensure each transport vehicle has been properly placarded in accordance with 49 CFR Part 172 Subpart F.

Item 22. Check to ensure operator has been provided shipping papers that comply with 49 CFR Part 172 Subpart C. For shipments transported by Government vehicle, shipping paper will be DD Form 836.

Item 23. Ensure operator(s) sign DD Form 626, are given a copy and understand the hazards associated with the shipment.

Item 24. Applies to Commercial Shipments Only. If shipment is made under DOT Exemption 868, ensure that shipping papers are properly annotated and copy of Exemption 868 is with shipping papers.

DD FORM 626, OCT 95 Page 3 of 3 Pages

Figure 10-2. DD Form 626 (continued)

SHIPPING PAPER AND EMERGENCY RESPONSE INFORMATION FOR HAZARDOUS MATERIALS TRANSPORTED BY GOVERNMENT VEHICLES

THIS VEHICLE IS TRANSPORTING HAZARDOUS MATERIALS

1. DATE PREPARED	2. DATE OF TRAVEL	PAGE OF PAGES

TO BE COMPLETED BY THE UNIT OR SHIPPER T.O. OFFICE. IF A CONTINUATION SHEET IS ATTACHED, X THIS BOX ⟶

3. CARGO

PACKAGES		PROPER SHIPPING DESCRIPTION	TOTAL WEIGHT	NET EXPLOSIVE QUANTITY
NUMBER a.	KIND b.	c.	d.	e.

4. EMERGENCY NOTIFICATION. IN ALL CASES OF ACCIDENT, INCIDENT, BREAKDOWN OR FIRE, PROMPT NOTIFICATION MUST BE GIVEN TO *(List 24-hour telephone numbers)*:

a. SHIPPER	b. CONSIGNEE	c. ADDITIONAL NOTIFICATION

FOR SAFE HAVEN/REFUGE, IMMEDIATELY CALL APPROPRIATE MTMC AREA HOTLINE LISTED BELOW:

EASTERN UNITED STATES: 1-800-524-0331 WESTERN UNITED STATES: 1-800-435-4566

NEW JERSEY ONLY: 1-800-642-1381

24-HOUR EMERGENCY ASSISTANCE TELEPHONE NUMBERS:

DOD NON-EXPLOSIVE HAZARDOUS MATERIALS ONLY: 1-800-851-8061	DOD HAZARD CLASS 1 (EXPLOSIVES) ONLY CALL ARMY OPERATIONS CENTER - COLLECT	NATIONAL RESPONSE CENTER (NRC) 1-800-424-8802
TO CALL FROM A SHIP AT SEA USE: 804-279-3166	703-697-0218/0219 ASK FOR THE WATCH OFFICER	TO CALL FROM A SHIP AT SEA USE: 202-267-2675
		DOD RADIOACTIVE MATERIAL ONLY - COLLECT: 309-782-3510 ASK FOR STAFF DUTY OFFICER

FOR EMERGENCY RESPONSE INFORMATION, SEE BACK OF THIS FORM.

5. REMARKS

6. CERTIFICATION

THIS IS TO CERTIFY THAT THE ABOVE NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED, AND LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION.

a. SIGNATURE OF SHIPPER REPRESENTATIVE	b. SIGNATURE(S) OF VEHICLE OPERATOR(S)

DD FORM 836, JUL 96 PREVIOUS EDITION IS OBSOLETE.

Figure 10-3. DD Form 836

EMERGENCY RESPONSE INFORMATION

Guide Numbers 46 and 50 from the U.S. Department of Transportation Emergency Response Guide Book P 5800.6 are reproduced hereon. These guides are applicable to Hazard Class 1 Materials (Explosives).
Mark an X in the appropriate box:

☐ **USE GUIDE 46 FOR EXPLOSIVES: (1.1), (1.2), (1.3), (1.5) AND (1.6)**

☐ **USE GUIDE 50 FOR EXPLOSIVES: (1.4)**

For all other hazardous materials or substances, annotate appropriate Emergency Response Guide Book Guide Number in the block below, and attach a copy of the guide number page or pages.

GUIDE NUMBER(S):

GUIDE 46 (ERG 93)

POTENTIAL HAZARDS

FIRE OR EXPLOSION:
MAY EXPLODE AND THROW FRAGMENTS 1 MILE OR MORE IF FIRE REACHES CARGO.

HEALTH HAZARDS:
Fire may produce irritating or poisonous gases.

EMERGENCY ACTION

IF FIRE REACHES CARGO, DO NOT FIGHT FIRE.

IF YOU KNOW OR SUSPECT THAT HEAVILY-ENCASED EXPLOSIVES, SUCH AS BOMBS OR ARTILLERY PROJECTILES ARE INVOLVED, STOP ALL TRAFFIC AND BEGIN TO EVACUATE ALL PERSONS, INCLUDING EMERGENCY RESPONDERS, FROM THE AREA IN ALL DIRECTIONS FOR 5000 FEET (1 MILE) FOR RAIL CAR OR 4000 FEET (3/4 MILE) FOR TRACTOR/TRAILER.

WHEN HEAVILY-ENCASED EXPLOSIVES ARE NOT INVOLVED, EVACUATE THE AREA FOR 2500 FEET (1/2 MILE) IN ALL DIRECTIONS.

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide limited protection.

CALL Emergency Response Telephone Number on Shipping paper FIRST. If Shipping Paper NOT AVAILABLE or NO ANSWER, CALL CHEMTREC AT 1-800-424-9300.

FIRE
Cargo Fires: DO NOT FIGHT FIRE WHEN IT REACHES CARGO. Withdraw from area and let fire burn.

Truck and Equipment Fires: Try to prevent fire from reaching the explosive cargo compartment. Flood with water; if no water is available use Halon, dry chemical or earth.

Promptly isolate the scene by removing **ALL PERSONS** from the vicinity of the incident if there is a fire. First, move people out of line-of-sight of the scene and away from windows. Then, obtain more information and specific guidance from competent authorities listed on the shipping papers.

SPILL OR LEAK
Shut off ignition sources; no flares, smoking or flames in hazard area.
Do not touch or walk through spilled material.

FIRST AID
Call emergency medical care.
Use first aid treatment according to the nature of the injury.

GUIDE 50 (ERG 93)

POTENTIAL HAZARDS

FIRE OR EXPLOSION:
MAY EXPLODE AND THROW FRAGMENTS 1/3 MILE OR MORE IF FIRE REACHES CARGO.

HEALTH HAZARDS:
Fire may produce irritating or poisonous gases.

EMERGENCY ACTION

IF FIRE REACHES CARGO, DO NOT FIGHT FIRE.

STOP ALL TRAFFIC AND BEGIN TO EVACUATE ALL PERSONS, INCLUDING EMERGENCY RESPONDERS, FROM THE AREA FOR 1500 FEET (1/3 MILE) IN ALL DIRECTIONS.

Positive pressure self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing will provide limited protection.

CALL Emergency Response Telephone Number on Shipping paper FIRST. If Shipping Paper NOT AVAILABLE or NO ANSWER, CALL CHEMTREC AT 1-800-424-9300.

FIRE
Cargo Fires: DO NOT FIGHT FIRE WHEN IT REACHES CARGO. Withdraw from area and let fire burn.

Truck and Equipment Fires: Try to prevent fire from reaching the explosive cargo compartment. Flood with water; if no water is available use Halon, dry chemical or earth.

Promptly isolate the scene by removing **ALL PERSONS** from the vicinity of the incident if there is a fire. First, move people out of line-of-sight of the scene and away from windows. Then, obtain more information and specific guidance from competent authorities listed on the shipping papers.

SPILL OR LEAK
Shut off ignition sources; no flares, smoking or flames in hazard area.
Do not touch or walk through spilled material.

FIRST AID
Call emergency medical care.
Use first aid treatment according to the nature of the injury.

SUPPLEMENTAL INFORMATION

Packages bearing the 1.4S label contain explosive substances or articles that are designed or packaged in such a manner that when involved in a fire, may burn vigorously with localized detonations and projection of fragments; effects are usually confined to immediate vicinity of packages.

If fire threatens cargo area containing packages bearing the 1.4S label, consider initial isolation of at least 50 feet in all directions. Fight fire with normal precaution from a reasonable distance.

DD FORM 836 (BACK), JUL 96

Figure 10-3. DD Form 836 (continued)

INSTRUCTIONS FOR COMPLETING DD FORM 836, "SHIPPING PAPER AND EMERGENCY RESPONSE INFORMATION FOR HAZARDOUS MATERIALS TRANSPORTED BY GOVERNMENT VEHICLES"

GENERAL

DD Form 836 shall be completed by a *qualified individual from a transportation office, unit or other organization offering hazardous material for transportation in commerce or areas accessible to the general public.

*An individual is considered qualified to complete and sign (certify) DD Form 836, having satisfactorily completed the DoD Standard Transportation of Hazardous Material Course from one of the DoD-approved schools listed in the Defense Traffic Regulation. This person shall be appointed in writing by the activity or unit commander, to include scope of authority.

STEP 1

Item 1. Enter the place and date the material was certified (e.g., Fort Campbell, 1 Jan 95).

Item 2. Enter the date this material will move in commerce.

Enter the page number and total number of pages of the DD Form 836. Mark an "X" on the box if there are continuation sheets. Enter "Page 1 of 5 Pages" or leave blank if there are no extension pages.

STEP 2

Item 3.

a. Indicate the total numbers of packages.

b. Indicate the type of package (box, pallet, etc.).

c. Describe hazardous materials on DD Form 836 (Shipping Paper) in accordance with the requirements of Title 49 CFR, subpart C, Shipping Papers (49 CFR 172.200 - 172.205). NOTE: If additional space is required, use continuation sheet (DD Form 836C).
Example: Rocket Motors, 1.1C, UN 0280, PG II
Stannic Phosphide, 4.1, UN 1433, PG I

d. The total weight (e.g., gm, kg, etc.), or volume (e.g., liter, cc, etc.) of hazardous material.

e. Net Explosive Quantity (NEQ). For explosive (Hazard Class 1) shipments, enter the Net Explosive Quantity (weight) for each proper shipping description listed. Net Explosive Quantity (weight) for explosives shall be obtained from the Joint Hazard Classification System (JHCS). NOTE: For transportation, the NEQ (weight) shall consist of the Net Explosive Weight and the Net Propellant Weight combined, as listed in the JHCS.
Example: 1 round - NSN 1315-00-761-2073
DODIC C706

Net explosive weight (kgs): 1.57642
Net propellant weight (kgs): .310793
Net Explosive Quantity (kgs): 1.887213

STEP 3

Item 4.

a. Enter the shipper address and telephone number where the hazardous material originated. Telephone number shall be monitored at all times (24 hour) until shipment is received by consignee. Telephone number is for NOTIFICATION PURPOSES ONLY. Emergency assistance shall be obtained from the appropriate 24 HOUR EMERGENCY ASSISTANCE TELEPHONE NUMBER.

b. Enter the six-digit Department of Defense Activity Address Codes (DODAAC) and/or the in-the-clear geographical location of the ultimate consignee (if known) or receiver of HAZMAT shipment.

c. Additional information or notification if needed.

STEP 4

Item 5. Additional handling instructions/information.

STEP 5

Item 6. The official or person who signs Item 6.a. must be qualified to certify that the shipment complies with the requirements of this instruction. Signature of certifying official or person must be in writing (longhand).

NOTES:

1. Units returning from exercise or firing range should have a qualified person ensure that all hazardous materials are properly repackaged and secured (i.e. blocked, braced, tied down) prior to transportation.

2. Completion of a new DD Form 836 is not required. Original DD Form 836 may be used provided that:

a. Change Item 1. (Date Prepared) and Item 2. (Date of Travel) as appropriate.

b. Change Item 3. (Cargo):
(i) Hazardous materials used shall be deleted from form by crossing out or lining through.
(ii) Hazardous materials which remain, but are in different quantities shall have the correct amounts entered in the appropriate section(s).

c. Change Item 6.a.:
(i) Cross out original signature if different certifier will be used.
(ii) A qualified individual (if available) shall sign in writing (longhand). If a qualified individual is not available, then the Officer-In-Charge (OIC) or Non-Commissioned Officer-In-Charge (NCOIC) shall sign in writing (longhand) to verify that the above procedures have been performed for the return trip to base.

STEP 6

Item 6.b. Signature(s) of operator(s) of vehicle who certifies that material is properly blocked, braced, and safe for transport in commerce.

DD FORM 836 INST, JUL 96

Figure 10-3. DD Form 836 (continued)

SHIPPING PAPER AND EMERGENCY RESPONSE INFORMATION FOR HAZARDOUS MATERIALS TRANSPORTED BY GOVERNMENT VEHICLES *(Continuation Sheet)*

TO BE COMPLETED BY THE UNIT OR SHIPPER T.O. OFFICE	PAGE OF PAGES

3. CARGO *(Continued)*

PACKAGES		PROPER SHIPPING DESCRIPTION	TOTAL WEIGHT	NET EXPLOSIVE QUANTITY
NUMBER a.	KIND b.	c.	d.	e.

DD FORM 836C, JUL 96

Figure 10-3. DD Form 836 (continued)

3. CARGO *(Continued)*			PAGE OF PAGES	
PACKAGES		PROPER SHIPPING DESCRIPTION	TOTAL WEIGHT	NET EXPLOSIVE QUANTITY
NUMBER a.	KIND b.	c.	d.	e.

DD FORM 836C (BACK), JUL 96

Figure 10-3. DD Form 836 (continued)

d. **Loading and Unloading Hazardous Material**. General requirements for loading and unloading hazardous material are as follows:

- Ensure the vehicle is safe to operate and free of fire hazards.
- Check to ensure there are no exposed wires.
- Clean off excess oil or grease accumulated on the vehicle.
- Check the fuel system for leaks.
- Set hand brake during loading and unloading and chock the wheels.
- Inspect the load and the vehicle during rest or refueling stops.
- Do not leave the vehicle unattended.
- Do not let anyone loiter near the loaded vehicle.
- Ensure hazardous cargo is marked with the proper shipping name, identification number, and appropriate labels (see 49 CFR).
- Mark the front, sides, and rear of the vehicle with the appropriate placards.
- Ensure the shipper blocked and braced the load to prevent shifting.

Drivers should see their squad leader for information on the loading, blocking, and bracing requirements for hazardous cargo before going to the loading site.

e. **Specific Types of Hazardous Material**. Besides cargo that requires DD Forms 626 and 836, specific types of hazardous material have other requirements that must be met for transporting. Personnel involved must know and observe current safety regulations and policies contained in AR 55-355, AR 385-10, 49 CFR, as well as in local policies.

(1) ***Ammunition***. Figure 10-4 shows correct loading for ammunition. Rules specific to ammunition shipments are as follows:

- Ensure tops of boxes are marked THIS SIDE UP.
- Do not smoke within 25 feet--or use open flames within 25 feet--while loading, unloading, or transporting cargo.
- Turn the engine off during loading and unloading.
- Handle ammunition with care.
- Do not overload the vehicle.
- Carry two serviceable carbon dioxide or dry chemical fire extinguishers with at least a 10 BC rating and know how to use them.
- See TB 5-4200-200-10 for selections.
- Close and secure the tailboard or tailgate. Do not load on the tailgate.

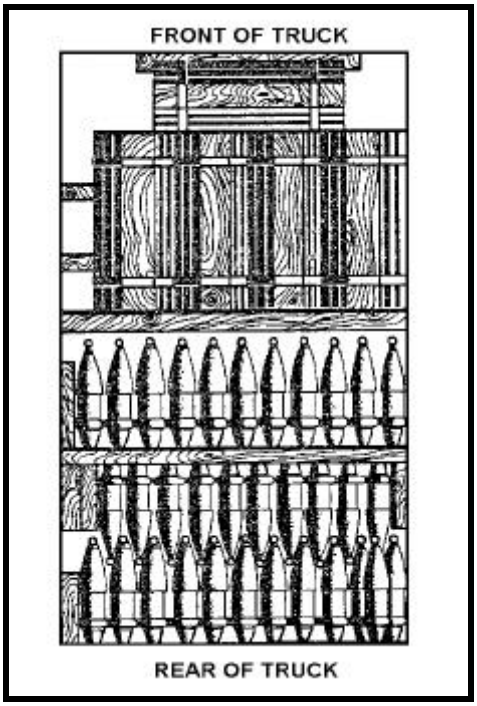

Figure 10-4. Proper loading

arrangement for ammunition

- Consult with officials on the scene before passing by a fire on the road.
- Do not push or tow a truck carrying explosives except to move it off the road.
- Do not transport detonating caps with other explosives. Complete rounds of artillery ammunition, including fuses and primer, can be carried in one vehicle.
- Ensure that artillery shells are laid on their sides. The sides of the projectiles should be parallel with the truck body.
- Follow a planned route that minimizes exposure in densely populated areas. Park in uncongested areas.
- Drive a safe distance away from other traffic.
- Protect cargo against shifting. Do not make sudden stops or turns.

(2) ***Flammable liquids***. The following are special rules for flammable liquids:

- Do not smoke within 25 feet or use open flames within 25 feet during loading, unloading, or transport of the cargo.
- Turn the engine off during loading and unloading.
- Carry two serviceable carbon dioxide or dry chemical fire extinguishers with at least a 10 BC rating and know how to use them.
- Remove tarpaulins. If this is not possible, dry and air tarpaulins that have been saturated with gasoline or fumes before storing them.
- Ensure that electrical connections on petroleum semitrailers and filling apparatus are properly grounded.
- Do not wear hobnail or metal-cleated boots.

(3) ***Flammable solids and oxidizing materials***. Special rules for flammable solids and oxidizing materials are as follows:

- Protect the load from adverse weather and keep cargo dry.
- Provide ventilation of the load.

(4) ***Corrosive liquids***. The following special rules apply to corrosive liquids:

- Inspect containers for leaks. Do not load leaking containers.
- Ensure containers are tightly closed (whether full or empty).
- Ensure storage batteries are protected from movement and from contacting each other; protect and insulate the terminals against short circuits.

(5) ***Compressed gases***. The following are special rules for compressed gases:

- Place cylinders on flat surfaces.
- Ensure cylinders are blocked and braced to prevent movement.
- Ensure engine is stopped.

(6) ***Poisons***. Do not transport poisons in the same vehicle with food or edible material.

(7) ***Radioactive materials***. The ITO has a copy of the Department of Transportation regulations that govern radioactive shipments. Also see TM 55-315 and 49 CFR. The following rules apply to radioactive shipments:

- Ensure that packages containing radioactive materials have yellow or white labels on them IAW 49 CFR.
- Use partitions in cargo compartments to separate yellow labeled packages from people and undeveloped film.
- Base the separation distances on the total transport index shown on the yellow labels. The transport index shows the degree of control the driver must use while transporting the cargo. Add up the transport indexes on all yellow labels. Do not load more than 50 transport indexes on one truck. After all transport indexes have been added, verify the separation distance with the shipper.
- Check the cargo area of the vehicle for protruding nails or bolts.
- Do not transport hazard Class 1.1, 1.2, or 1.5 explosives with radioactive materials.
- Be sure to monitor for radioactivity, if required. If monitoring is required, the shipper must provide the monitoring device and someone skilled in its use.
- Do not transport personnel in the cargo compartment of a vehicle transporting radioactive material.

(8) ***Chemical agents and chemical ammunition***. Special rules for chemical shipments are as follows:

- Check the cargo area of the vehicle for protruding nails or bolts.
- Carry individual chemical defense equipment.
- Know proper first aid procedures (see FM 21-11).
- Check the shipper's use of TM 3-250. TM 3-250 has a table that shows chemical agents that cannot be loaded together.
- Know the symptoms produced by escaping toxic chemical agents.
- Wear any protective clothing the shipper provides.
- Do not smoke within 25 feet or use open flames within 25 feet during loading, unloading, or transport of the cargo.

According to AR 50-6, shipments of certain categories of chemical surety material must be accompanied by technical escorts who are qualified by the CPRP.

10-7. OVERSIZE AND OVERWEIGHT LOADS. Civil authorities determine limitations on the weight and dimensions of vehicles using public highways. Consequently, restrictions vary considerably for shipments in the United States and in overseas areas. Unit personnel must know the applicable regulations for the area in which they are operating. During combat operations, the movement control headquarters issues instructions for determining oversize and overweight loads. These limitations are established to prevent damage to MSRs and to allow for safe movement of vehicles.

a. **Clearance Permit**. The unit or activity planning to move oversize or overweight cargo requests a DD Form 1266 (Figure 10-5, pages 10-18 and 10-19). This form furnishes the ITO with complete information on the cargo and vehicles to be used. The ITO requests a special hauling permit from the authorities. Clearance permits for the ARNG and USAR are submitted to the state DMC (see FM 55-1). The requesting unit must furnish the following information to the ITO or DMC:

- Type of equipment.
- Gross weight, axle loads, and spacing, height, width, and length.
- Origin and destination of movement.
- Date and time of movement.
- Nature of cargo (within security limitations).

See Appendix N for information regarding military vehicle axle weight distribution formulas and percentages.

b. **Clearance Warnings**. The sides and rear of oversize cargo must have adequate clearance lights or red flags to warn other traffic.

c. **Escort Vehicles**. When escort vehicles are required, they either must have warning lights or be driven with vehicle headlights on. When required, the lead vehicle carries a WIDE LOAD FOLLOWS sign on the front. The rear escort vehicle has a WIDE LOAD AHEAD sign on the back.

10-8. CARGO SECURING PROCEDURES. To secure the load for safe delivery to its destination, the shipper must follow procedures to lash and/or block and brace cargo. The shipper is responsible for blocking and bracing a load. However, since the driver must deliver the load safely to its destination, some general rules apply:

- Block crates, boxes, and barrels to keep them from shifting en route.
- Use crib blocking whenever possible. It need not be nailed to the floor or sides if placed tightly against the cargo to reduce damage to the floor and sideboards of the vehicle.
- If a gap exists between pipes or lumber and the end of the trailer, block the load with a gate constructed with 4- by 4-inch boards to prevent it from slipping.
- All lumber used for blocking must be free of knots and strong enough to provide a rigid and stable support for the load en route.
- When the load must be protected from the weather, pad the corners of boxes or crates to prevent damage to the tarpaulin.

10-9. DOUBLE-STACKING TRAILERS. Problems may arise when stacking one trailer onto another for transport, especially if loading facilities or equipment (such as ramps, loading docks, and gantry cranes) are available. Several methods can be used to solve these problems. When semitrailers are stacked and shipped as cargo or moved as a matter of convenience, be sure to coordinate with the receiving authority to ensure that the shipment can be unloaded. Experienced drivers should be used when tractors are positioning semitrailers onto or removing them from other semitrailers.

REQUEST FOR SPECIAL HAULING PERMIT

DATE 1 Jan 97

SECTION I - GENERAL

1. ORGANIZATION	2. STATION	3. DATE OF MOVEMENT	
		a. STARTING	b. COMPLETION
100th Trans Co (Lt Mdm Trk)	Fort Eustis, Virginia 23604	0700 15 Jan 97	1830 16 Jan 97

4. POINT OF ORIGIN	5. DESTINATION
Fort Eustis, Virginia	Fort Drum, New York

6. ARRIVAL AT STATE LINES

DATE	TIME	STATE LINE
15 Jan 97	1308	Va/Md
15 Jan 97	1440	Md/Pa
16 Jan 97	1145	Pa/NY

7. ROUTING (Stipulate US Routes, State Routes, etc.)

IS 64, Va 168, Va 33, IS 64, IS 95, IS 495E, US 1, IS 695, IS 83, IS 81, US 11

8. ESCORT REQUIREMENTS

None

SECTION II - VEHICLE AND LOAD DATA

DESCRIPTION (a)	TYPE (2-ton etc) (b)	NO. OF VEHICLES (c)	REGISTRATION NUMBER (d)	HEIGHT (e)	WIDTH (f)	LENGTH (g)	WEIGHT (h)
9. VEHICLE							
A. TRUCK							(Empty)
B. TRUCK-TRACTOR	5-ton	8	See Item 12	103.5	98.3	158.3	(Empty) 18,560
C. TRAILER							(Empty)
D. SEMI-TRAILER	12-ton	8	See Item 12	108.3	97.3	348.5	(Empty) 14,240
E. OTHER (Specify)							(Empty)
10. LOAD Orgn Impedimenta				-	-	-	5,000
11. OVERALL (Vehicle and load)				108.3	98.3	526	(Gross) 37,800

12. DESCRIPTION OF LOAD (Brief general description: Organization impedimenta, etc.) (Within security limitations)

Organization impedimenta.

Registration Numbers

Trac	Tlr	Trac	Tlr
5E551	5T9991	5E5555	5T9995
5E5552	5T9992	5E5556	5T9996
5E5553	5T9993	5E5557	5T9997
5E5554	5T9994	5E5558	5T9998

SAMPLE

13. LOAD OVERHAND	a. FRONT	b. REAR	c. LEFT SIDE	d. RIGHT SIDE
	NA	NA	NA	NA

DD FORM 1 JAN 59 1266

Figure 10-5. DD Form 1266 (front)

14. NUMBER OF AXLES	1 (A)	2 (B)	( ) (C)	( ) (D)	( ) (E)	( ) (F)	( ) (G)	( )	
	AXLE 1 a	AXLE 2 b	AXLE 3 c	AXLE 4 d	AXLE 5 e	AXLE 6 f	AXLE 7 g	AXLE 8 h	TOTAL I
15. NUMBER OF TIRES	2	4	4	4	4				18
16. TIRE WIDTH (Inches)	11	11	11	11	11				
17. TIRE SIZES	1100x20	1100x20	1100x20	1100x20	1100x20				
18. AXLE LOAD (Empty)	8,244	6,958	6,958	5,320	5,320				32,800
19. AXLE LOAD (Loaded)	9,044	8,058	8,058	6,320	6,320				37,800

SAMPLE

20. AXLE SPACING (See item 14 for identification)	A SPACING	B SPACING	C SPACING	D SPACING	E SPACING	F SPACING	G SPACING	
	140	54	162	52				

21. REMARKS

22. MOVEMENT BY HIGHWAY IS

[ ] ESSENTIAL TO NATIONAL DEFENSE

[x] IN THE INTEREST OF NATIONAL DEFENSE

23. REQUESTING AGENCY	24. APPROVING AGENCY
100th Trans Co (Lt Mdm Trk)	
25. REQUESTED BY (Typed named, grade and title)	**26. APPROVED BY** (Typed named, grade and title)
Charles C. Chestnut, Cpt, TC, Commanding	

27. DATE	28. SIGNATURE	29. DATE	30. SIGNATURE
1 Jan 97	Charles C. Chestnut		

INSTRUCTIONS

GENERAL:

DD Form 1266 "Request for Special Hauling Permit" will be used to obtain special hauling permits for the movement of oversize/overweight vehicles over public highways when accompanying a convoy or when traveling separately.

This form, in duplicate and accompanied by letter of transmittal, will be forwarded through the local transportation officer so as to reach the appropriate headquarters not less than ten (10) working days prior to the starting date of the movement. Letters of transmittal will contain complete itinerary and explanation of the movement. One (1) letter of transmittal is sufficient when several DD Forms 1265 and 1266 involving one (1) movement are forwarded to the appropriate headquarters.

In cases where bona-fide emergencies exist, the information contained in this form and DD Form 1265 may be transmitted to the appropriate headquarters by telephone or electric transmission. In this event, reference will be made to item numbers in the sequence in which they appear on the forms. Items which do not apply will be so indicated.

SPECIFIC:

Item 9A, B, C, and D - Complete nomenclature of vehicles involved. More than one unit may be included, provided units are identical in equipment, load characteristics, routing and movement data. Total number of units shall be indicated prominently.

Item 9E - Note all units other than standard highway vehicles; road equipment, gunes, etc.

Item 9 (d) - Indicate the registration number for each unit or combination of units. Use additional page if required.

Item 14 - Indicate appropriate number of axles by inserting number in proper circles. Block out circules not applicable.

Item 21 - For movement through the District of Columbia, include name of manufacturer of equipment.

Figure 10-5. DD Form 1266 (back)

The methods described herein are not all-inclusive or restrictive. Based on the personnel, equipment, and facilities available--as well as on the skill and ingenuity of personnel engaged in the operation--units in the field may devise other methods or variations of the methods discussed here.

Procedures can be combined by using one loading method at origin and a different unloading method at destination. Consider the options when planning and conducting an assigned transport mission.

a. **Flip Method**. The flip method loads one semitrailer onto the other in a bed-to-bed position (Figure 10-6). This method requires no special facilities and can be done using a unit recovery vehicle or other lifting device.

The two semitrailers ride bed-to-bed. The top semitrailer is secured on the cargo bed of the transporting semitrailer using chains, wire, rope, or banding devices for tie down. The transporting tractor-semitrailer unit should rest on as level and compact a surface as possible during loading and unloading. This is essential to prevent accidents, personal injury, damage to equipment, and delays. When the transporting semitrailer is not hooked up to a tractor during loading operations, ensure that the surface on which the landing gear rests is firm. If necessary to prevent the landing gear legs from sinking into the ground, strengthen and reinforce the ground surface using fill, gravel, lumber or timbers, pierced steel planking, or other suitable materials. Block the wheels of the bottom semitrailer and set the brakes to prevent movement.

The flip method loading procedure is as follows:

- Spot two flatbed semitrailers, with side and end boards removed, side by side (parked axle-to-axle or axle-to-landing gear as desired).
- Fasten side rails together at two or more places using chain, wire rope, or other available materials, passed through the side rails.
- Use the recovery vehicle (or other lifting device) to lift the offside of the transported semitrailer and flip it over onto the cargo bed of the transporting semitrailer.
- Retract the landing gear either after the initial lift of the top semitrailer or after it is positioned on the cargo bed.
- Secure the top semitrailer to the bed of the lower semitrailer using chains and/or wire rope. Load and tie down the side and end boards.

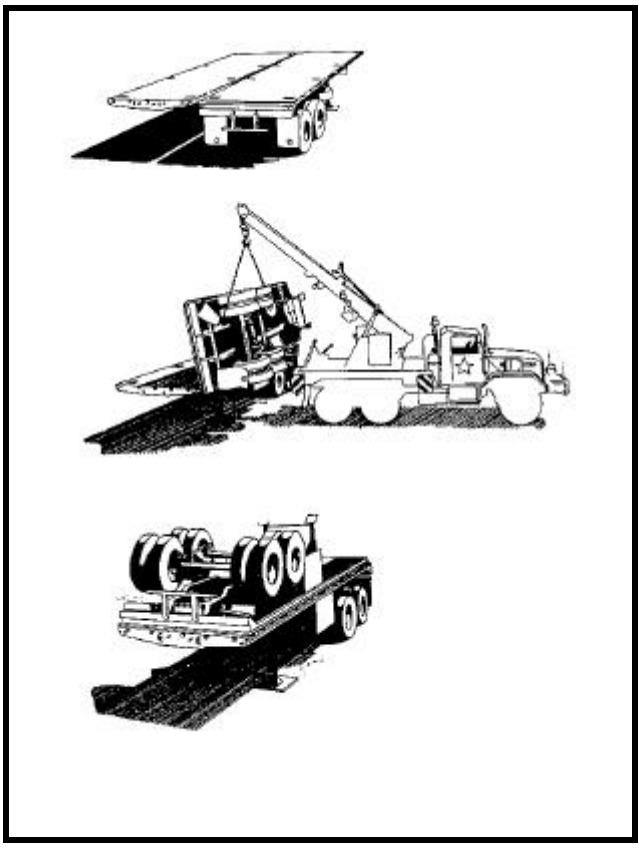

Figure 10-6. Flip method used for loading semitrailers

To unload the semitrailer at destination, reverse the loading steps:

- Remove all tie-downs and unload the side and end boards.
- Attach side rail tie-downs and use a recovery vehicle or other lifting device to lift and flip the semitrailer back onto the ground. Then remove the side rail tie-downs.
- Extend the landing gear after the rear wheels of the semitrailer rest on the ground. Use the recovery vehicle to hold the load until the gear is extended.

Field reports indicate that the following problems may occur when using this method:

- Side rails and marker lights on both semitrailers may be damaged during flipping.
- Semitrailer brake fluid may leak through the master cylinder vent.
- Landing gear may lose hydraulic fluid due to the semitrailer resting in an upside-down position.

Use care during loading and unloading to minimize damage. After delivery, both semitrailers will be inspected and serviced and/or repaired before being put back into service. A variation of the flip method is one in which the semitrailer is first flipped over to rest on its bed on the ground. Two recovery vehicles at each end (one set off to the side) then lift and hold this semitrailer while the transporting semitrailer is maneuvered under it. Then, the top semitrailer is lowered into place.

In the lifting, portable ramp, and terrain features methods, the top semitrailer rests in an upright position (on its wheels and landing gear) on the bed of the other semitrailer. It must not only be tied down but must also be securely blocked and braced.

b. **Lifting Method**. The lifting method loads the top semitrailer in an upright position (Figure 10-7, page 10-22). It requires no facilities and can be performed using one tractor and the unit recovery vehicle (or other suitable lifting device). The loading procedure is as follows:

- Back the transporting semitrailer up to the rear of the transported semitrailer.
- Use the recovery vehicle to lift the transported semitrailer by the rear lifting shackles.
- Back the transporting semitrailer approximately halfway under the lifted semitrailer. Lower the semitrailer onto the cargo bed of the other semitrailer.
- Shift the recovery vehicle to the front end of the top semitrailer and, using the front lifting shackles, lift the front end.
- Hold and maneuver the transported semitrailer with the recovery vehicle boom while the transporting semitrailer is backed into proper position under the load. Lower the semitrailer onto the cargo bed of the transporting semitrailer.
- Block, brace, and tie down the semitrailer; load and secure side and end boards.

If two recovery vehicles or lifting devices are available, they may be positioned at each end of the transported semitrailer (one set off to the side) to lift and hold that semitrailer while the transporting semitrailer is maneuvered and backed under it. The transported semitrailer is then lowered into position.

To unload the semitrailer at destination using the same method, reverse the loading steps as follows:

- Remove the semitrailer tie-downs and blocking and bracing. Unload side and end boards.
- Using a recovery vehicle, lift the transported semitrailer by the front lifting shackles. Hold it while the transporting semitrailer is moved forward approximately three-quarters of its length.
- Lower the front end of the transported semitrailer onto the ground.
- Shift the recovery vehicle to the rear of the transported semitrailer and, using the rear lifting shackles, lift it free of the transporting semitrailer. Pull the transporting semitrailer out.
- Lower the rear of the transported semitrailer to the ground. Release it from the recovery vehicle's lift.
- Install (or load) the side and end boards. Move the semitrailer out.

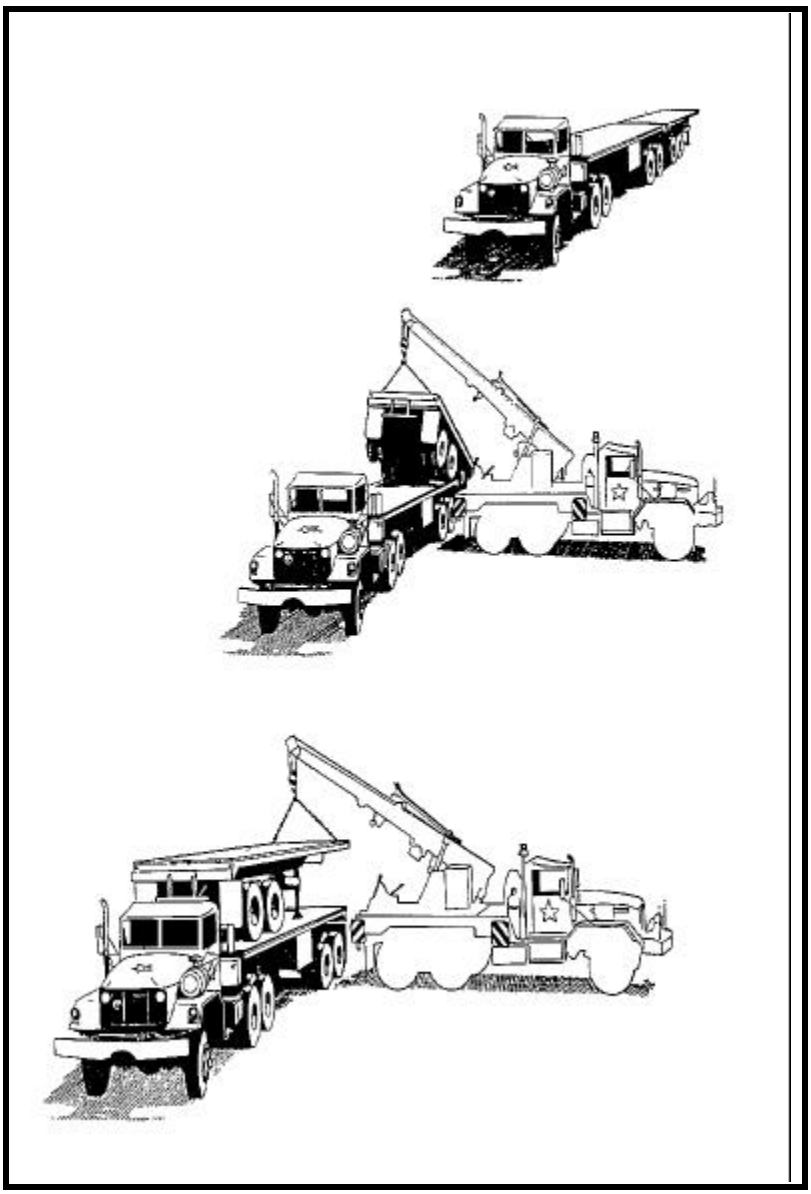

Figure 10-7. Lifting method used for loading

c. **Portable Ramp Method**. This method requires making a portable ramp (mounted on skids, rollers, or wheels) for use in the loading process (Figure 10-8). The loading procedure is as follows:

CAUTION

If the ramp is on wheels or rollers, it must be blocked. If the trans-porting semitrailer is not hooked to a tractor during loading, the wheels must be blocked and the brakes set.

- Position the ramp at the rear of the transporting semitrailer.
- Use a tractor to back the transported semitrailer up the ramp and onto the transporting semitrailer. Extend the landing gear, uncouple, and remove the tractor.
- Block, brace, and tie down the semitrailer. Load and secure the side and end boards.

To unload the semitrailer at the destination using this same method, reverse the loading steps as follows:

CAUTION

Instructions contained in the loading caution apply as well to the unloading.

- Place the portable ramp in position at the rear of the transporting semitrailer.
- Remove the tie-downs and blocking and bracing. Unload the side and end boards.
- Back the towing tractor into position and up the ramp. Hook up and tow the semitrailer from the transporting semitrailer.
- Install (or load) the side and end boards. Move the semitrailer out.

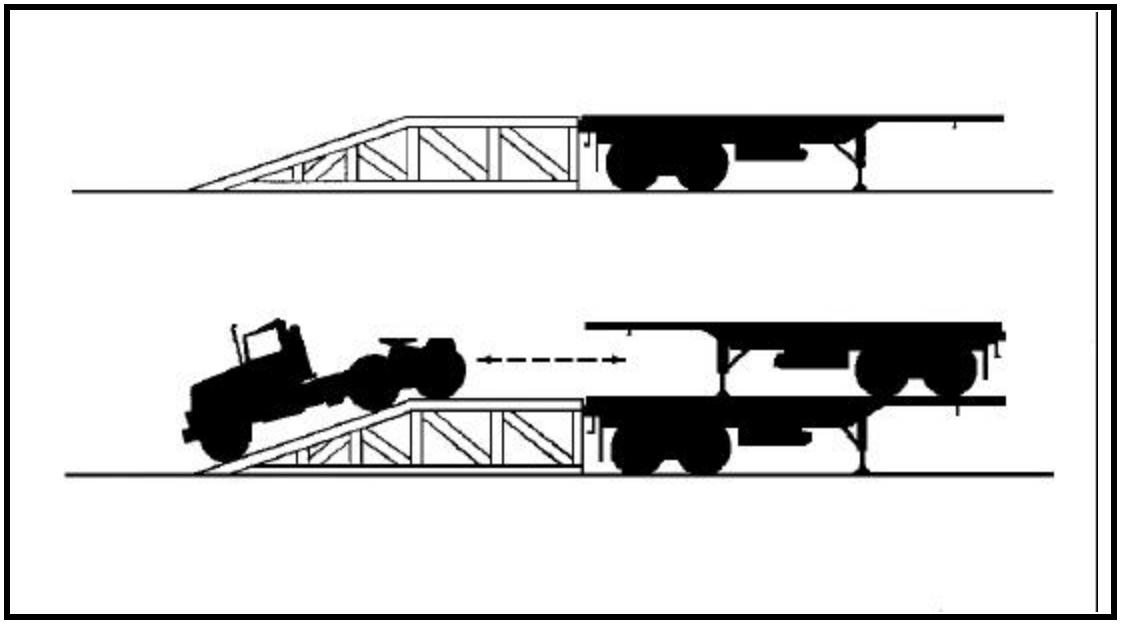

Figure 10-8. Portable ramp used for loading semitrailers

d. **Fixed Ramp Method**. The fixed ramp method is similar to the portable ramp method (Figure 10-9, page 10-24). In this instance, the ramp used is an immovable field expedient type, and the transporting semitrailer must be backed into position at the ramp for loading.

The fixed ramp is prepared using heavy timbers, railroad ties, or impacted earth. The timbers or ties should be spiked, bolted, or otherwise secured together. Tamp the earthen ramp firmly and then

surface it with planks, pierced steel planking, or other available materials to make a firm, solid surface. Shore the earthen ramp at the loading end to prevent breakdown during its use. The loading procedure is as follows:

CAUTION

If the transporting semitrailer is not hooked to a tractor during loading, the wheels must be blocked and the brakes set.

- Back the transporting semitrailer into position at the ramp.
- Back the semitrailer to be transported up the ramp and into position on the bed of the transporting semitrailer. Extend the landing gear, uncouple, and remove the tractor.
- Block, brace, and tie down the transported semitrailer. Load and secure the side and end boards.

To unload the semitrailer at the destination using a tow-off method, either a portable or fixed ramp or other similar facility may be used. If a portable ramp is used, the procedures for the portable ramp method apply. If a fixed ramp or facility is used, procedures for the fixed ramp method apply.

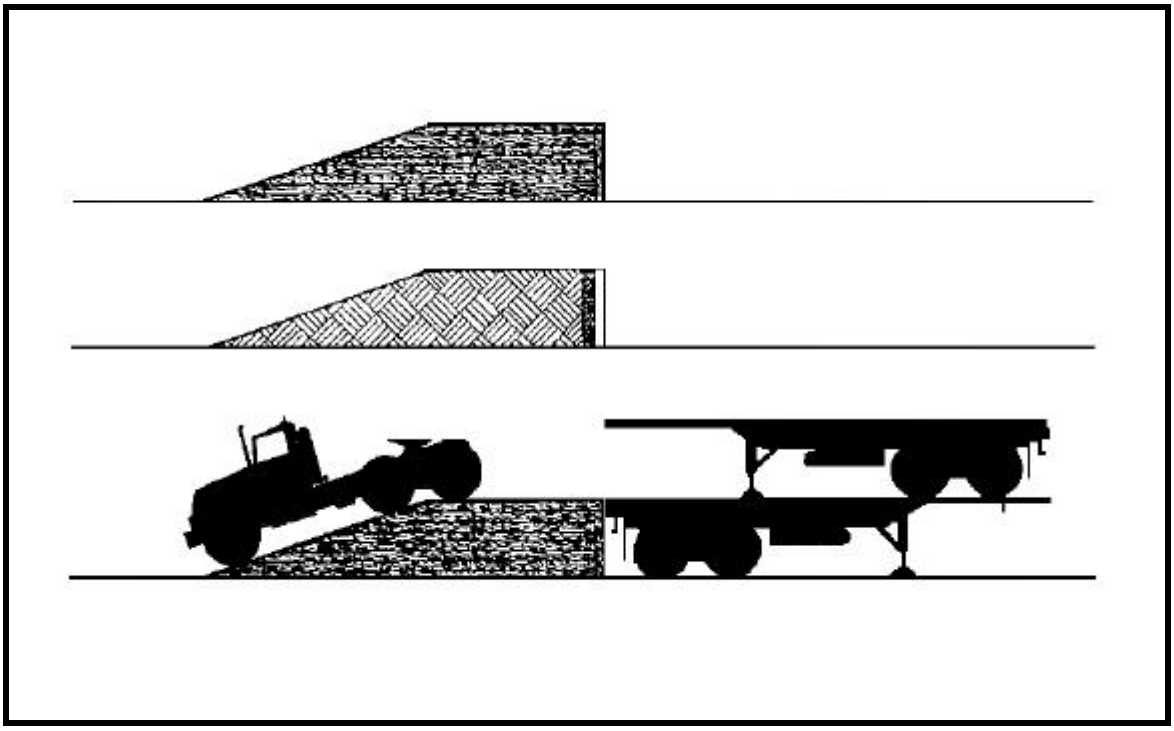

Figure 10-9. Fixed ramp used for loading semitrailers

e. **Use of Terrain Features**. Natural or manmade terrain features (arroyos, dry river beds, natural land depressions, cuts and fills, ditches, trenches, and so forth) may be used or adapted for

use as loading ramps (Figure 10-10). Based on the contours of the feature used, either little or no pioneer work or extensive work may be required to prepare it for operations.
Figure 10-10 (a) shows a cross section of a terrain feature. The heavily shaded area (b) illustrates where earth removal is required to make it a suitable ramp; (c) illustrates the feature after it is prepared. Note that the face of the cut has been shored to prevent breakdown during use. The loading procedure (d) generally follows the procedures for ramp loading stated earlier.

Unloading the transported semitrailer at destination depends on the facilities available at that point. The semitrailer can be unloaded by any of the methods outlined above, or it may be unloaded using a terrain feature.

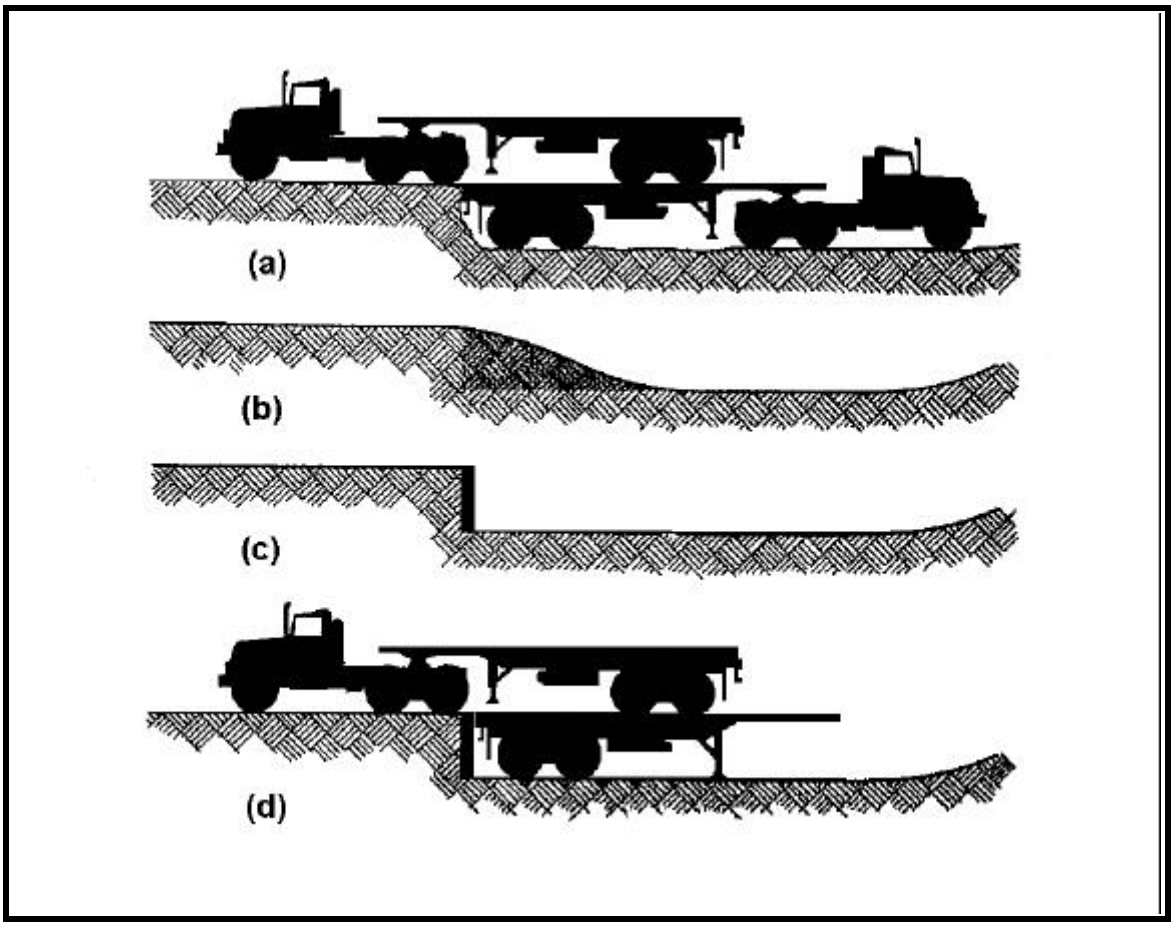

Figure 10-10. Use of terrain features for loading semitrailers